

REMARKS

I. Status of the Application.

Claims 1 and 3-23 are currently pending in the Application. In the Office Action, the Examiner:

- (a) alleged that the November 28, 2007 amendment to the specification constituted new matter under 35 U.S.C. §132(a);
- (b) alleged that claim 1 and 13, as presently presented, does not comply with the written disclosure requirement under 35 U.S.C. §112, first paragraph;
- (c) alleged under 35 U.S.C. §103(a) that claims 1, 3-4, and 13 are obvious over U.S. Patent No. 4,672,674 to Clough ("Clough");
- (d) alleged under 35 U.S.C. §103(a) that claims 5, 9, 14, 17-18, and 21-23 are obvious over Clough in view of U.S. Patent No. 6,275,592 to Vartiainen ("Vartianen");
- (e) alleged under 35 U.S.C. §103(a) that claims 6 and 10 are obvious over Clough in view of Vartiainen and further in view of U.S. Patent No. 5,471,538 to Sasaki; and
- (f) determined that claims 7-8, 11-12, 15-16 and 19-20 would be allowable if rewritten in independent form.

While the Applicants agree with Examiner's conclusion that claims 7-8, 11-12, 15-16, and 19-20 contain allowable subject matter, the Applicants traverse the objection to the specification and the rejections of claims 1, 3-5, 9, 14, 17-18, and 21-23 for all the reasons set forth below.

II. The Objections to Amended Specification Should Be Withdrawn.

The Applicants respectfully submit that the amendments to the paragraph starting on page 8, line 20 (the "Paragraph") filed with the November 28, 2007 amendment merely restate or

rephrase the subject matter that is described in the Application as originally filed and thus, the Examiner's rejection of the amendments as constituting new matter under 35 U.S.C. §132(a) should be withdrawn. "Mere rephrasing of a passage does not constitute new matter. Accordingly, a rewording of a passage where the same meaning remains intact is permissible." MPEP §2163.07 (8th Ed., Rev. 7) (2008) (citing *In re Anderson*, 471 F.2d 1237 (CCPA 1973)).

Specifically, the amendments to the second to last sentence of the Paragraph that reads "This balancing scheme utilizes, in the idle state, the ever present, far field diffuse room noise as its acoustic input and employs a long average time" are mere restatements of information contained in the Application as originally filed. For example, the originally filed Application states that "the balancing scheme is run in the *idle state*." (p. 8, lines 21-22). Moreover, the Application describes in several places that the room noise is in the far field. For example, the paragraph starting on line 13 of page 8 discusses a process for preventing far-end person from hearing noise during the idle state and specifically describes the room noise coming from the far field on lines 15-16 and on line 18 of page 8. Thus, the amendments to the second to last sentence of the Paragraph do nothing more than restate that the described balancing scheme occurs during the idle state and that the room noise comes from the far field, which as discussed above is already described in other places in the Application.

Similarly, Applicants respectfully submit that the changes to the third to last sentence of the Paragraph also just restate and rephrase what was originally part of the Application. The proposed amendments to the third to last sentence appears as follows: "As a result of this balancing scheme, the two omnidirectional elements produce like input signals for processing in signal flow processor 20, ~~which is essential prior to the application.~~ In other words, the elements

take on substantially equal complex sensitivities (in amplitude and phase) thus allowing signal flow processor 20 to apply transfer τ and $Gm1$." Applicants respectfully submit that these amendments are also supported by the Application. For example, lines 21-23 of the Paragraph specifically discusses running the balance scheme "in the idle state to effectively match the *electro acoustic sensitivities* of the two omnidirectional elements." Also in line 23 on page 8 and line 1 on page 9 of the Paragraph, the original Application states that the balancing scheme results in the omnidirectional elements producing "like input signals." Thus, the amendments to the third to last sentence of Paragraph merely restates that the two omnidirectional elements takes on substantially equal complex sensitivities, which as noted above was already discussed in the original Application.

Moreover, lines 1-2 on page 9 of the original Application states that such like input signal "is essential prior to the application of τ and $Gm1$." Thus the amendment to the third to last sentence of the Paragraph merely rephrases this statement so it clearly reads that it's the substantially equal sensitivities of the omnidirectional elements that allow the signal flow processor to apply τ and $Gm1$. Thus, the amendments to the third to last sentence of the Paragraph do not change the meaning of what was originally disclosed in the paragraph or add new matter, but rather, merely restates and rephrases the language present in the original Application for the sake of clarity and ease of the reader.

For all the forgoing reasons, Applicants respectfully submit that the November 28, 2007 amendments to the Paragraph do not constitute new matter and are fully supported by the Application as originally filed. Thus, Applicants respectfully submit that the Examiner's objection of the amendments as being new matter under 35 U.S.C. §132(a) should be withdrawn

and the amendments should be entered as previously presented in Applicants' November 28, 2007 paper.

III. The Rejections Of Claims 1 and 13 Under 35 U.S.C. §112, First Paragraph Should Be Withdrawn.

Applicants respectfully submit that the rejections of claims 1 and 13 under 35 U.S.C. § 112, first paragraph, should be withdrawn because the specification describes all the subject matter of previously presented claims 1 and 13. The fundamental factual issue is whether the specification conveys with reasonable clarity to those skilled in the art that the applicants were in possession of the currently claimed invention at the time of filing. MPEP §2163.02 (citing, *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991)). The subject matter of the claim need not be described literally (i.e., using the same terms) in order for the disclosure to satisfy the description requirement and it is the Examiner's initial burden of presenting, by a preponderance of evidence, why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. MPEP §§ 2163.02 & 2164 (citing, *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 97 (CCPA 1976)).

Applicants respectfully submit that amended claims 1 and 13 are clearly supported by the originally filed Application and thus, would convey to one skilled in the art that the Applicants were in possession of the claimed invention at the time of filing. In rejecting the claims under 35 U.S.C. §112, first paragraph, the Examiner argues that the specification does not clearly disclose how the processing of such second microphone's output "undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently at the second

microphone element" is performed." (Office Action, p. 3) Applicants respectfully disagree with this assertion.

As described in the Application, the gain (G_{m1}) is applied to the second microphone element by the signal flow processor. For example, the Application states "when phone 30 is in either the receive state or in the double talk state, signal flow processor 20 utilizes the digital signal processor to provide an advantageous electrical time delay (τ) to microphone element 22 and a compatible and advantageous amplitude gain (G_{m1}) to microphone element 24." (p. 7, lines 14-17). Moreover, the Application describes exemplary processes to one of ordinary skill in the art on how to calculate such amplitude gain that needs to be applied. (pp. 10-11). For example, the Application provides equations as to how one of ordinary skill in the art can calculate such amplitude gain and the Application also describes how to calculate the amplitude gain by driving the receiver with an electrical impulse. (p. 10, lines 7-23; p. 11, lines 6-13). Further, the Application walks through a simulated performance analysis for the microphone system and how the amplitude gain is calculated. (pp. 11-13, Figs. 2-3).

For all the foregoing reasons, Applicants respectfully submit that the Application conveys with reasonable clarity to those skilled in the art that the Applicants were in possession of the currently claimed invention at the time of filing. The Application provides the necessary information for one of ordinary skill in the art to calculate the gain in more than one way and one of ordinary skill in the art would know how to use the signal flow processor to apply such gain to the second microphone. Accordingly, Applicants respectfully submit that the rejection of claims 1 and 13 under 35 U.S.C. §112, first paragraph, should be withdrawn.

IV. The Rejections Of Claims 1-6, 9-10, 13-14, 17-18, And 21-23 As Being Obvious Under 35 U.S.C. §103(a) Should Be Withdrawn.

Applicants respectfully submit that the rejection of claims 1-6, 9-10, 13-14, 17-18, And 21-23 should be withdrawn because the Examiner fails to establish a *prima facie* case of obviousness in the Office Action. Moreover, Applicants respectfully submit that the cited references do not disclose all the elements of the claims in order to support a conclusion of obviousness.

A) The Rejections of Claims 1, 3-4 And 13 Under 35 U.S.C. §103(a) As Being Obvious Over Cohen Should Be Withdrawn Because a *Prima Facie* Case For Obviousness Has Not Been Established.

Applicants respectfully submit that the Examiner failed to establish a *prima facie* case for obviousness and that the rejections of claims 1, 3-4 and 13 under 35 U.S.C. §103(a) as being obvious over Cohen should be withdrawn. As stated in the Manual of Patent Examination and Procedures ("MPEP"), "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." MPEP at §2141. The examiner needs to step in the "shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made" and determine "whether the claimed invention "as a whole" would have been obvious at that time to that person." *Id.* (emphasis added). After performing such an analysis, the Examiner then must articulate the findings of fact concerning the state of the art and the teachings of the references applied, and should provide an explicit analysis supporting the obviousness rejection under 35 U.S.C. § 103(a) to properly establish a *prima facie* case of obviousness. *Id.*; *See also, KSR Int'l. Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1740-41 (2007). If

the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." MPEP at §2141.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness because the Examiner has not offered an explicit analysis as to why the claimed invention as a whole is obvious and is basing the conclusions of obviousness on mere conclusory statements. "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l.*, 127 S.Ct. at 1741 (*quoting In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). In the rejection of the claims under 35 U.S.C. §103(a), the Examiner determines that each claim limitation of independent claims 1 and 13 is disclosed in Cohen, except for the microphone elements being an omnidirectional microphone. However, in reviewing Cohen and the Examiner's remarks, Applicant respectfully submits that the Examiner fails to articulate how Cohen discloses or explain why it would be obvious based on Cohen to have a microphone system or a method of producing a null that has a signal flow processor that: (i) applies to the output of the second microphone element an "amplitude gain . . . such that the second . . . output undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element" and (2) applies to the first microphone element "an electrical time delay . . . such that the first . . . output undergoes a phase change substantially equal to that which a coupling acoustical traveling wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element", as claimed in claims 1 and 13.

Not only has the Examiner failed to provide the necessary information to establish a *prima facie* case for obviousness based on Cohen, Applicants respectfully submit that a conclusion cannot be made that claims 1 and 13 are obvious over Cohen, because Cohen does not disclose or even discuss all the claim limitations of claims 1 and 13. For example, Cohen does not disclose or discuss a microphone system or a method of producing a null that has a signal flow processor that: (i) applies to the output of the second microphone element an "amplitude gain . . . such that the second . . . output undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element" and (2) applies to the first microphone element "an electrical time delay . . . such that the first . . . output undergoes a phase change substantially equal to that which a coupling acoustical traveling wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element", as claimed in claims 1 and 13.

For the reasons discussed above, Applicants respectfully submit that the rejections of claim 1 and 13 as being obvious over Cohen should be withdrawn. Applicants also respectfully submit that the rejections of claims 3-4 under 35 U.S.C. §103(a) should also be withdrawn because each of these claims depend from and incorporate all the limitations of independent claim 1. MPEP §2143.03 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988) (if an independent claim is nonobvious under 35 U.S.C 103, then any claim depending therefrom is nonobvious)).

C. The Rejections of Claim 5, 9, 14, 17-18, and 21-23 Under 35 U.S.C. §103(a) As Being Obvious Over Clough In View Of Vartiainen And Claims 6 And 10 Under 35 U.S.C. §103(a) As Being Obvious Over Clough In View Of Vartiainen And Further In View Of Sasaki Should Be Withdrawn.

Applicants respectfully submit that the rejection of claims 5, 9, 14, 17-18, and 21-23 under 35 U.S.C. §103(a) as being obvious over Clough in view of Vartiainen and claims 6 and 10 under 35 U.S.C. §103(a) as being obvious over Clough in view of Vartiainen and further in view of Sasaki are all now moot and should be withdrawn because each of these claims depend from and incorporate all of the limitations of either independent claims 1 or 13, which as discussed above, are not obvious over the cited art. "If an independent claim is not obvious under 35 U.S.C. §103, then any claim depending therefrom is not obvious." MPEP § 2143.03 (citing *In re Fine*, 837 F.2d 1382, 1385 (C.C.P.A. 1970)). Accordingly, it is respectfully requested that the rejections of claims 5, 9, 14, 17-18, and 21-23 under 35 U.S.C. §103(a) be withdrawn.

D. Conclusion Of Non-Obviousness.

For all the reasons set forth above, the Applicants respectfully submit that the rejections of claims 1-6, 9-10, 13-14, 17-18, And 21-23 under 35 U.S.C. §103(a) should all be withdrawn and the pending claims should proceed to allowance, because each of these claims are not obvious in view of the cite prior art.

V. Allowable Subject Matter.

While the Applicants agree with the Examiner's conclusion that claims 7-8, 11-12, 15-16, and 19-20 would be allowable if rewritten in independent form, Applicants respectfully submit that claims 1 and 13, as previously presented, are currently in allowable form. Thus, Applicants respectfully submit that it is not necessary for the Applicants to rewrite any of these claims in

independent form in view of each of these claims depending from either allowable base claims 1 or 13.

VI. Applicants Petition for an Extension of Time.

Applicants hereby petition for an extension of time of three (3) months, under 37 C.F.R. § 1.136(a), thereby extending the deadline for response, pursuant to 37 C.F.R. §§ 1.7(a) & 1.136(a), to Friday, August 22, 2008. Applicant authorizes payment for this extension in the amount of \$525.00 to be charged to the identified credit card. When doing so, please reference the above-listed docket number for this file.

VII. Applicants Request For Continued Examination.

Applicants request continued examination by submitting a Request for Continued Examination transmittal form, this response, and requesting that the \$405.00 filing fee be charged to the identified credit card.

VIII. Interview Request.

If the Examiner determines that there are any further objections or rejections that would prevent this Application from proceeding to allowance, the Examiner is invited to contact the undersigned to arrange an interview with the undersigned to discuss such objections or rejections.

CONCLUSION

For the reasons set forth above, allowance of this Application is respectfully requested. Aside from those specified herein, Applicants believe no additional fees are due at this time. In the event Applicants have inadvertently overlooked the need for payment of any fees, Applicants conditionally petition therefore, and authorize any deficiency to be charged to deposit account 09-0007. When doing so, please reference the above-listed docket number.

Respectfully submitted,

ICE MILLER LLP

/Alexander D. Forman/

Alexander D. Forman
Attorney No. 51,691
ICE MILLER LLP
One American Square, Suite 2900
Indianapolis, IN 46282-0200
Telephone: (317) 236-5826
Facsimile: (317) 592-5433

Date: August 21, 2008